WHAT IS CLAIMED IS:

1. An antenna comprising:

a plurality of vertical conductive surfaces each having a top edge, the plurality of vertical surfaces oriented to form side surfaces of an upright structure with a first gap defined between adjacent vertical surfaces;

a plurality of horizontal conductive surfaces forming a top surface of the upright structure, the plurality of horizontal surfaces oriented to form a second gap between adjacent horizontal surfaces;

third gaps formed between a top edge of each one of the plurality of vertical surfaces and an adjacent one of the plurality of horizontal surfaces;

a first conductive bridge electrically connecting a first and a second horizontal surface of the plurality of horizontal surfaces;

a second conductive bridge electrically connecting a third and a fourth horizontal surface of the plurality of horizontal surfaces;

a first vertical surface of the plurality of vertical surfaces for connecting to a signal feed for the antenna; and

a second and a third vertical surface of the plurality of vertical surfaces for connecting to ground.

2. The antenna of claim 1 wherein the plurality of vertical surfaces comprises four rectangular vertical surfaces and the upright structure comprises a rectangular regular polyhedron.

3. The antenna of claim 1 wherein the plurality of vertical surfaces comprises four square vertical surfaces, and wherein the upright structure comprises a cube.

4. The antenna of claim 1 wherein the plurality of horizontal surfaces comprises four triangular surfaces.

5. The antenna of claim 1 wherein the first, second and third vertical surfaces are selected to provide left hand circular polarization for a signal transmitted by the antenna.

6. The antenna of claim 1 wherein the first, second and third vertical surfaces are selected to provide right hand circular polarization for a signal transmitted by the antenna.

7. The antenna of claim 1 further comprising a switch for selecting one of the first, second, third and fourth vertical surfaces as the signal feed for the antenna.

8. The antenna of claim 1 further comprising a ground plane disposed below the antenna.

9. The antenna of claim 8 wherein a position of the ground plane is selected to affect a radiation pattern of the antenna.

10. The antenna of claim 8 wherein one or more of the first, second, third and fourth vertical surfaces are affixed to the ground plane.

11. The antenna of claim 1 further comprising a reflective surface disposed above the antenna.

12. The antenna of claim 11 wherein the reflective surface comprises a cone-shaped reflective surface.

13 The antenna of claim 11 wherein a position of the reflective surface relative to the antenna is selected to affect a radiation pattern of the antenna.

14. The antenna of claim 1 wherein the plurality of vertical surfaces is equal in number to the plurality of horizontal surfaces, and wherein each one of the plurality of horizontal surfaces is disposed adjacent a top edge of each one of the plurality of vertical surfaces, defining the third gap therebetween.

15. The antenna of claim 1 wherein the first, second and third gaps provide capacitive coupling between adjacent surfaces defining the gap.

16. The antenna of claim 1 wherein dimensions of the first, second and third gaps are selected to provide desired performance characteristics for the antenna.

17. The antenna of claim 1 wherein the bottom edge of each of the plurality of vertical surfaces comprises a beveled bottom edge.

18. The antenna of claim 1 wherein the plurality of vertical surfaces comprises four substantially rectangular vertical surfaces and the upright structure comprises a cylinder.

19. The antenna of claim 1 wherein the dimensions of each one of the plurality of vertical surfaces and the dimensions of each one of the plurality of horizontal surfaces are selected to provide desired antenna performance characteristics.

20. The antenna of claim 1 having a resonant frequency determined by the capacitance presented by the first, second and third gaps, the dimensions of each one of the plurality of vertical surfaces and the dimensions of each one of the plurality of horizontal surfaces.

21. The antenna of claim 1 further comprising a tuning capacitor for determining a resonant frequency of the antenna.

22. The antenna of claim 1 wherein the first vertical surface comprises a bottom edge, and wherein the bottom edge is connected to the signal feed.

23. The antenna of claim 1 wherein the second and the third vertical surfaces each comprise a bottom edge and wherein the bottom edge of each of the second and the third vertical surfaces is connected to ground.

24. The antenna of claim 1 further comprising current flow paths through the plurality of vertical surfaces and the plurality of horizontal surfaces from the signal feed to ground, wherein a capacitance and an inductance in the current flow paths determines antenna performance characteristics.

25. The antenna of claim 24 wherein the first, second and third gaps create the capacitance in the current flow paths

26. The antenna of claim 24 further comprising a tuning capacitor to create capacitance in one or more of the current flow paths.

27. The antenna of claim 24 wherein dimensions of the plurality of vertical surfaces and the plurality of horizontal surfaces create the inductance in the current flow paths.

28. An antenna comprising:

a first, a second, a third and a fourth conductive surface each vertically oriented to form a side face of a rectangular regular polyhedron with first gaps defined between adjacent surfaces, each one of the first, second, third and fourth surfaces comprising a top edge and a bottom edge;

a fifth, a sixth, a seventh and an eighth triangular conductive surface each having a base and an apex and each disposed in a plane forming a top face of the polyhedron with the

apex directed toward a center region of the top face, wherein second gaps are formed between adjacent ones of the fifth, sixth, seventh and eighth triangular surfaces;

wherein third gaps are formed between the top edge of each one of the first, second, third and fourth surfaces and a proximate base of one of the fifth, sixth, seventh and eighth triangular surfaces;

a first conductive bridge electrically connecting a fifth and a sixth triangular surface, wherein the fifth and the sixth triangular surfaces are opposingly directed on the top face;

a second conductive bridge electrically connecting a seventh and an eighth triangular surface, wherein the seventh and the eighth triangular surfaces are opposingly directed on the top face;

a bottom edge of the first surface for connecting to a signal feed; and

a bottom edge of the second and the third surfaces for connecting to ground.

29. The antenna of claim 28 wherein the polyhedron comprises a cube.

30. The antenna of claim 28 wherein each one of the first, second, third and fourth rectangular surfaces is disposed on a dielectric substrate.

31. The antenna of claim 28 wherein the fifth, sixth, seventh and eighth triangular surfaces are disposed on a dielectric substrate.

32 An antenna comprising:

a first, a second, a third and a fourth conductive surface disposed on a flexible dielectric substrate having first gaps defined between adjacent surfaces, each one of the first, second, third and fourth surfaces comprising a top edge and a bottom edge;

the substrate forming a cylinder with the first, second, third and fourth surfaces disposed vertically thereon;

a fifth, a sixth, a seventh and an eighth triangular conductive surface each having a base and an apex and each disposed in a plane forming a top surface of the cylinder with each apex directed toward a center region of the top surface, wherein second gaps are defined between adjacent ones of the fifth, sixth, seventh and eighth triangular surfaces;

wherein third gaps are formed between the top edge of each one of the first, second, third and fourth surfaces and a proximate base of one of the fifth, sixth, seventh and eighth triangular surfaces;

a first conductive bridge electrically connecting a fifth and a sixth triangular surface, wherein the fifth and the sixth triangular surfaces are opposingly disposed on the top surface;

a second conductive bridge electrically connecting a seventh and an eighth triangular surface, wherein the seventh and the eighth triangular surfaces are opposingly disposed on the top surface;

a bottom edge of the first surface for connecting to a signal feed; and

a bottom edge of the second and the third surfaces for connecting to ground.